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December 4, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Re: U.S. Patent Application No. 10/635,822
Filed: August 7, 2003
Title: Plant Fatty Acid Synthases and Use in Improved Methods for Production
of Medium-Chain Fatty Acids
Applicant: Katayoon DEHESH
A&P Ref. No.: 16518.131

Sir:

The following documents are forwarded herewith for appropriate action by the U.S. Patent and Trademark Office (USPTO):

1. Information Disclosure Statement;
2. Form PTO-1449 (6 pages) with 48 accompanying references; and
3. Return postcard.

Please stamp the postcard with the filing date of these documents and return it to our courier.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned. Applicants do not believe any fees are due in conjunction with this filing. However, if any fees under 37 C.F.R. §§ 1.16 or 1.17 are required in the present application, including any fees for extensions of time, then the Commissioner is hereby authorized to charge such fees to Arnold & Porter Deposit Account No. 50-2387, referencing matter number 16518.131. A duplicate copy of this letter is enclosed.

Respectfully submitted,

Rachel L. Adams (Reg. Attorney No. 54,660)
David R. Marsh (Reg. Attorney No. 41,408)

Attachments



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Katayoon DEHESH

Group Art Unit: To be Assigned

Appln. No.: 10/635,822

Examiner: To be Assigned

Filed: August 7, 2003

Atty. Docket: 16518.131

For: Plant Fatty Acid Synthases and Use in
Improved Methods for Production of
Medium-Chain Fatty Acids

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The attention of the Examiner is invited to the documents listed on the attached Form PTO-1449. Copies of the listed documents are submitted herewith.

It is respectfully requested that the information above be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

CERTIFICATION AND/OR FEE

Because this Information Disclosure Statement is being submitted prior to issuance of the first action on the merits of the above-captioned application, no certification or fee is required.

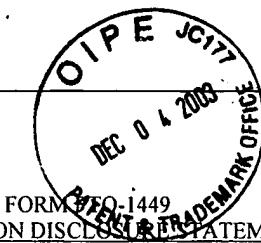
Respectfully submitted,

David R. Marsh (Reg. Attorney No. 41,408)
Rachel L. Adams (Reg. Attorney No. 54,660)

Date: December 4, 2003

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<p style="text-align: center;">  U. S. PATENT DOCUMENTS </p>					ATTY. DOCKET NO.	APPLICATION NO.		
					16518.131	10/635,822		
					APPLICANTS			
					Katayoon DEHESH			
					FILING DATE	GROUP		
August 7, 2003	To Be Assigned							
U. S. PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE	
	AA1	5,585,535	12/17/96	Fehr <i>et al.</i>				
	AB1							
	AC1							
	AD1							
	AE1							
FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
	AF1	92/03564 ✓	03/1992	PCT			<input checked="" type="checkbox"/> Yes No	
	AG1	92/20236 ✓	11/1992	PCT			<input checked="" type="checkbox"/> Yes No	
	AH1	93/10240 ✓	05/1993	PCT			<input checked="" type="checkbox"/> Yes No	
	AI1	94/10189 ✓	05/1994	PCT			<input checked="" type="checkbox"/> Yes No	
	AJ1	94/10288 ✓	05/1994	PCT			<input checked="" type="checkbox"/> Yes No	
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)								
	AK	1	Clough <i>et al.</i> , "Purification and Characterization of 3-Ketoacyl-Acyl Carrier Protein Synthase III from Spinach", <i>The Journal of Biological Chemistry</i> , 267(29):20992-20998 (1992) ✓					
	AL	1	Dehesh <i>et al.</i> , Database EMBL, Accession No. AX073486 (XP002213168) (2001) ✓					
	AM	1	Dehesh <i>et al.</i> , "GT-2: A Transcription Factor with Twin Autonomous DNA-Binding Domains of Closely Related but Different Target Sequence Specificity", <i>The EMBO Journal</i> , 11(11):4131-4144 (1992) ✓					
	AN	1	Dehesh, "KAS IV: 3-Ketoacyl-ACP Synthase from <i>Cuphea sp.</i> is a Medium Chain Specific Condensing Enzyme", <i>The Plant Journal</i> , 15(3):383-390 (1998) ✓					
	AO	1	Dehesh <i>et al.</i> , "Production of High Levels of 8:0 and 10:0 Fatty Acids in Transgenic Canola by Overexpression of CH FatB2, a Thioesterase cDNA from <i>Cuphea hookerianana</i> ", <i>The Plant Journal</i> , 9(2):167-172 (1996) ✓					
	AP	1	Dehesh <i>et al.</i> , "Two Novel Thioesterases are Key Determinants of the Bimodal Distribution of Acyl Chain Length of <i>Cuphea palustris</i> Seed Oil", <i>Plant Physiol.</i> , 110:203-210 (1996)					
EXAMINER						DATE CONSIDERED		
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.								



ATTY. DOCKET NO. 16518.131 APPLICANTS Katayoon DEHESH FILING DATE August 7, 2003	APPLICATION NO. 10/635,822

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
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	AB2						
	AC2						
	AD2						
	AE2						

FOREIGN PATENT DOCUMENTS

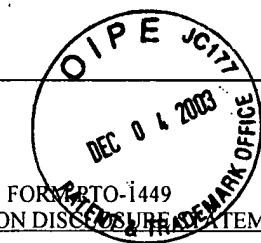
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
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	AG2	95/15387 ✓	06/1995	PCT			<input checked="" type="checkbox"/> Yes No
	AH2	96/23892 ✓	08/1996	PCT			<input checked="" type="checkbox"/> Yes No
	AI2	98/46766 ✓	10/1998	PCT			<input checked="" type="checkbox"/> Yes No
	AJ2	0 969 014 ✓	01/2000	EPO			<input checked="" type="checkbox"/> Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AK	2	Eccleston <i>et al.</i> , "Expression of Lauroyl-Acy1 Carrier Protein Thioesterase in <i>Brassica napus</i> Seeds Induces Pathways for Both Fatty Acid Oxidation and Biosynthesis and Implies a Set Point for Triacylglycerol Accumulation", <i>The Plant Cell</i> , 10:613-621 (1998) ✓
AL	2	Fuhrmann <i>et al.</i> , "Factors Controlling Medium-Chain Fatty Acid Synthesis in Plastids from Maturing <i>Cuphea</i> Embryos", <i>Z. Naturforsch.</i> , 48c:616-622 (1993) ✓
AM	2	Harwood, "Fatty Acid Metabolism", <i>Ann. Rev. Plant Physiol. Plant Mol. Biol.</i> , 39:101-138 (1988) ✓
AN	2	Hawkins <i>et al.</i> , "Characterization of acyl-ACP Thioesterases of Mangosteen (<i>Garcinia mangostana</i>) Seed and High Levels of Stearate Production in Transgenic Canola", <i>The Plant Journal</i> , 13(6):743-752 (1998) ✓
AO	2	International Search Report, PCT/US01/23369 dated September 25, 2002 (4 pages)
AP	2	Jaworski <i>et al.</i> , "A Cerulenin Insensitive Short Chain 3-Ketoacyl-Acy1 Carrier Protein Synthase in <i>Spinacia oleracea</i> Leaves", <i>Plant Physiology</i> , 90:41-44 (1989) ✓

EXAMINER	DATE CONSIDERED

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FORM PTO-1449
INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.	APPLICATION NO.
16518.131	10/635,822
APPLICANTS	
Katayoon DEHESH	
FILING DATE	GROUP
August 7, 2003	To Be Assigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA3						
	AB3						
	AC3						
	AD3						
	AE3						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AF3	00/07433 ✓	02/2000	PCT			x Yes No
	AG3	00/75343 ✓	12/2000	PCT			x Yes No
	AH3	01/29238 ✓	04/2001	PCT			x (abstract only) Yes No
	AI3						Yes No
	AJ3						Yes No

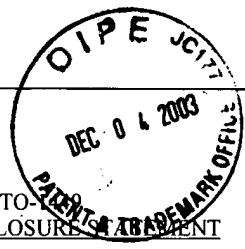
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AK	3	Kaneko <i>et al.</i> , Database EMBL, Accession No. D90905 (XP002213167) (1996). ✓
	AL	3	Kaneko <i>et al.</i> , "Sequence Analysis of the Genome of the Unicellular Cyanobacterium <i>Synechocystis</i> sp. Strain PCC6803 II. Sequence Determination of the Entire Genome and Assignment of Potential Protein-coding Regions", <i>DNA Research</i> , 3:109-136 (1996) ✓
	AM	3	Kauppinen, "Structure and Expression of the <i>Kas12</i> Gene Encoding a β -Ketoacyl-Acyl Carrier Protein Synthase Isozyme from Barley", <i>The Journal of Biological Chemistry</i> , 267(33):23999-24006 (1992) ✓
	AN	3	Leonard <i>et al.</i> , "A Cuphea β -Ketoacyl-ACP Synthase Shifts the Synthesis of Fatty Acids towards Shorter Chains in <i>Arabidopsis</i> Seeds Expressing Cuphea FatB Thioesterases", <i>The Plant Journal</i> 13(5):621-628 (1998) ✓
	AO	3	Martini, "Modification of Fatty Acid Composition in the Storage Oil of Transgenic Rapeseed", <i>Biological Chemistry Hoppe-Seyler</i> , vol. 376, pp. S55 (1995) ✓
		3	Ohlrogge, "Design of New Plant Products: Engineering of Fatty Acid Metabolism", <i>Plant Physiol.</i> , 104:821-826 (1994) ✓

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



FORM PTO-146 <u>INFORMATION DISCLOSURE STATEMENT</u>	ATTY. DOCKET NO.	APPLICATION NO.
	16518.131	10/635,822
	APPLICANTS	
	Katayoon DEHESH	
	FILING DATE	GROUP
August 7, 2003	To Be Assigned	

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
AA4						
AB4						
AC4						
AD4						
AE4						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
AF4						Yes No
AG4						Yes No
AH4						Yes No
AI4						Yes No
AJ4						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AK	4	Post-Beittenmiller <i>et al.</i> , "In vivo Pools of Free and Acylated Acyl Carrier Proteins in Spinach", <i>The Journal of Biological Chemistry</i> , 266(3):1858-1865 (1991) ✓
AL	4	Radke <i>et al.</i> , "Transformation of <i>Brassica napus</i> L. Using <i>Agrobacterium tumefaciens</i> : Developmentally Regulated Expression of a Reintroduced Napin Gene", <i>Theor. Appl. Genet.</i> 75:685-694 (1988)
AM	4	Schuch <i>et al.</i> , "Medium-chain acyl-ACP Thioesterase is not the Exclusive Enzyme Responsible for Early Chain-Length Termination in Medium-Chain Fatty Acid Synthesis", <i>Grasas y Aceites</i> , vol. 44, Fasc 2, pp. 126-128 (1993) ✓
AN	4	Shimakata <i>et al.</i> , "Isolation and Function of Spinach Leaf β -Ketoacyl-(Acyl-Carrier-Protein) Synthases", <i>Proceedings of National Academy of Science, USA</i> , 79:5808-5812 (1982) ✓
AO	4	Siggard-Andersen <i>et al.</i> , "The fabJ-Encoded β -Ketoacyl-(Acyl Carrier Protein) Synthase IV from <i>Escherichia coli</i> is Sensitive to Cerulenin and Specific for Short-Chain Substrates", <i>Proc. Natl. Acad. Sci., USA</i> , 91:11027-11031 (1994) ✓
AP		Slabaugh <i>et al.</i> , "Condensing Enzymes from <i>Cuphea wrightii</i> Associated with Medium Chain Fatty Acid Biosynthesis", <i>The Plant Journal</i> , 13(5):611-620 (1998) ✓

EXAMINER

DATE CONSIDERED

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<p style="text-align: center;">O I P E JC177 JULY 06 2003 U. S. PATENT & TRADEMARK OFFICE</p> <p>FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT</p>					ATTY. DOCKET NO.	APPLICATION NO.		
					16518.131	10/635,822		
					APPLICANTS			
					Katayoon DEHESH			
					FILING DATE	GROUP		
August 7, 2003	To Be Assigned							
U. S. PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE	
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	AB5							
	AC5							
	AD5							
	AE5							
FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
	AF5						Yes No	
	AG5						Yes No	
	AH5						Yes No	
	AI5						Yes No	
	AJ5						Yes No	
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)								
	AK	5	Slabaugh <i>et al.</i> , GenEMBL Sequence Accession No. U67317 (1996)					
	AL	5	Slabaugh <i>et al.</i> , "cDNA Clones Encoding β -Ketoacyl-Acy1 Carrier Protein Synthase III from <i>Cuphea wrightii</i> ", <i>Plant Physiology</i> , 108:443-444 (1995) ✓					
	AM	5	Tai <i>et al.</i> , "3-Ketoacyl-Acy1 Carrier Protein Synthase III from Spinach (<i>Spinacia oleracea</i>) is not Similar to Other Condensing Enzymes of Fatty Acid Synthase", <i>Plant Physiology</i> , 103:1361-1367 (1993) ✓					
	AN	5	Töpfer <i>et al.</i> , "Modification of Plant Lipid Synthesis", <i>Science</i> , 268:681-685 (1995) ✓					
	AO	5	Tsay <i>et al.</i> , "Isolation and Characterization of the β -Ketoacyl-Acy1 Carrier Protein Synthase III Gene (fabH) from <i>Escherichia coli</i> K12", 267(10):6807-6814 (1992) ✓					
	AP	5	Voelker <i>et al.</i> , "Genetic Engineering of a Quantitative Trait: Metabolic and Genetic Parameters Influencing the Accumulation of Laurate in Rapeseed", <i>The Plant Journal</i> , 9(2):229-241 (1996) ✓					
EXAMINER					DATE CONSIDERED			
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.								



FORM PTO-1448

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.	APPLICATION NO.
16518.131	10/635,822
APPLICANTS	
Katayoon DEHESH	
FILING DATE	GROUP
August 7, 2003	To Be Assigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA6						
	AB6						
	AC6						
	AD6						
	AE6						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AF6						Yes No
	AG6						Yes No
	AH6						Yes No
	AI6						Yes No
	AJ6						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AK	6	Voelker <i>et al.</i> , "Plant Acyl-ACP Thioesterases: Chain-Length Determining Enzymes in Plant Fatty Acid Biosynthesis", <i>Genetic Engineering</i> , 18:111-133 (1996) ✓
	AL	6	Voelker <i>et al.</i> , "Fatty Acid Biosynthesis Redirected to Medium-Chains in Transgenic Oilseed Plants", <i>Science</i> , 257:72-74 (1992) ✓
	AM	6	Walsh <i>et al.</i> , "The Short Chain Condensing Enzyme has a Widespread Occurrence in the Fatty Acid Synthetases from Higher Plants", <i>Phytochemistry</i> , 29(12):3797-3799 (1990) ✓
	AN	6	Winter <i>et al.</i> , "Decarboxylation of Malonyl-(Acyl Carrier Protein) by 3-Oxoacyl-(Acyl Carrier Protein) Synthases in Plant Fatty Acid Biosynthesis", <i>Biochem. J.</i> , 321:313-318 (1997) ✓
	AO	6	
	AP	6	

EXAMINER	DATE CONSIDERED

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